designating a plurality of synchronization points such that switching between a decoding of one of said encoded representations and another of said encoded representations can be performed with no substantia. discontinuity.

9.   (Twice Amended) A computer readible medium having stored thereon a plurality of instructions which, when executed by a processor in a computer system, cause the processor to perform the steps of:

accepting an input media signal;

encoding said input media signal to generate a plurality of encoded representations, wherein at least a portion of the media signal is included in each representation and each encoded representation is encoded according to a different set of encoding parameters; and

indicating a plurality of synchronization points such that switching between a decoding of one of said encoded representations and another of said encoded representations can be performed with no substantial discontinuity.

10.   (Twice Amended) A system for producing a plurality of encoded representations of a video input sequence comprising:

a video encoder configured to generate said plurality of encoded representations of said video input sequence, wherein at least a portion of the media signal is included in each representation and said video encoder encodes each representation according to a different set of encoding parameters, and wherein the video encoder is further configured to designate a plurality of synchronization points such that switching between a decoding of one of said encoded representations to another of said encoded representations can be performed with no substantial discontinuity; and

an output module configured to output said encoded representations.

24.   (Twice Amended) A method of producing a plurality of encoded representations of an input media signal comprising:

providing the input media signal;

generating a set of data based upon said input media signal; and

using said set of data to generate the plurality of encoded representations of said input media signal, wherein at least a portion of the media signal is included in each

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representation and each encoded representation is encoded according to a different set of

encoding parameters.

34.   (Twice Amended) A computer readable medium having stored thereon a

plurality of instructions which, when executed by a processor in a computer system, cause

the processor to perform the steps of:

accepting an input media signal;

generating a set of data from said input media signal; and

using said set of data to generate a plurality of independently encoded

representations of said input media signal, wherein at least a portion of the media signal is

included in each representation and each encoded representation is encoded according to

a different set of encoding parameters.

Please add Claims 46-54 as follows:

46.   A method of encoding, the method comprising:

encoding a media signal to generate the plurality of encoded representations for at

least a selected part of the media signal, wherein each representation is encoded according

to a different set of encoding parameters, and wherein each of the encoded representations

is adapted to be decoded to play the selected part of the media signal, and wherein each of

the plurality of encoded representations are encoded using shared color data, motion

vector data, and/or discrete cosine coefficients.

47.   The method of claim 46, wherein said plurality of encoded representations are

interleaved in an output file or output stream.

48.   The method of claim 47, wherein the input media signal comprises a plurality of

different media sources.

49.   The method of claim 48, wherein the media sources comprise at least one from

the group consisting of: audio segments, video frames, graphics, and still images.

50.   The method of claim 47, wherein said input media signal comprises video and

audio.

51.   The method of Claim 47, wherein each of said encoded representations is a

representation of a portion of the input media signal.

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